

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 1, 3 and 7 to further clarify the subject matter of the invention. Claims 5 and 13 have been cancelled, without prejudice. Support for the amendment to claims 1 and 7 may be found, for example, in claim 5 and in the description of claim 7, steps (c) and (d) of the specification. No new matter has been added.

Applicants also note with appreciated the granting of an interview with the Examiner on June 11, 2008, during which claims 1, 3, 5 and 7 and the differences between the nanosheets of the present disclosure and the cited prior art were discussed.

Applicants respectfully submit that all pending claims are patentable over the cited prior art for the reasons set forth below.

II. The Rejection Of Claims 1-6 Under 35 U.S.C. § 102

Claims 1-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Takasu et al. (*Electrochimica Acta* 45 (2000), 4135-4141). Applicants respectfully submit that Takasu fails to anticipate the pending claims for at least the following reasons.

With regard to the present invention, amended claim 1 recites a colloidal ruthenic acid compound containing a ruthenic acid nanosheet, the ruthenic acid nanosheet having a thickness of not more than 1 nm, represented by the formula (1): $[\text{RuO}_{2+0.5x}]^x$, wherein $0 < x < 1$ and the ruthenic acid nanosheet is in the form of separated particles.

One feature of one embodiment of the present disclosure is a ruthenic acid nanosheet of less than 1 nm in thickness which is in the form of separated particles. This structure allows for an enhanced charging capability over that of commonly known ruthenium oxide. In addition, the ruthenic acid nanosheets, which are electron conductive layers having electrochemical stability, are stacked with proton conductive layers comprising water or hydrated protons on the molecular level. As such, the layered ruthenic acid compound exhibits significantly increased charging capability and is applicable to a high-powered large-capacitance super capacitor.

In contrast to the present invention, Takasu fails to disclose a nanosheet that is in the form of separated particles. Rather, the nanosheet of Takasu, is formed as a layered ruthenic acid intercalation compound that is formed to be a catalyst electrode with a large surface area on a substrate by dip coating an oxide. As such, Takasu fails to disclose a nanosheet having a thickness of not more than 1 nm.

Furthermore, Takasu would not inherently form a nanosheet in the form of separated particles. This is because Takasu fails to disclose a layered ruthenic acid intercalation compound comprising a layered structure of the ruthenic acid nanosheets and alkylammonium (as according to amended claim 3), which is useful in the separation of the nanosheet from the substrate. As such, Takasu does not anticipate each and every claim element of claim 1 of the present disclosure.

As the Examiner is aware, anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). As Takasu, at a minimum, fails to disclose a ruthenic acid nanosheet having a thickness of not more than 1 nm, represented by the formula (1): $[\text{RuO}_{2+0.5x}]^x$, wherein $0 < x < 1$,

wherein the ruthenic acid nanosheet is in the form of separated particles, it is clear that Takasu fails to anticipate claim 1. Therefore, it is respectfully requested that the rejection of claim 1 under § 102 be withdrawn.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. The Rejection Of Claims 7-8 And 10-12 Under 35 U.S.C. § 102

Claims 7-8 and 10-12 are rejected under 35 U.S.C. § 102(a) as being anticipated by Sugimoto et al. (*Angewandte Chemie*, 115 (5 September 2003), 4226-4230).

However, the instant application claims priority to JP 2003-092872, which has a filing date of March 28, 2003, and this priority document supports the subject matter set forth in the pending claims. As the effective filing date thereof predates the publication date of Sugimoto, which is September 5, 2003, it is respectfully submitted that Sugimoto does not constitute valid prior art to the instant application. A certified English translation of JP 2003-092872 is being filed concurrently with this Amendment in order to perfect the claim of priority. In view of the foregoing, it is respectfully submitted that the rejections based on Sugimoto must be withdrawn.

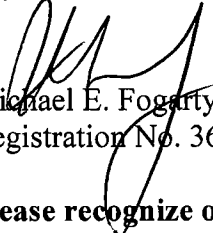
V. Conclusion

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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